

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO | |
|---|-----------------|----------------------|------------------------|-------------------------|--|
| 10/723,511 | 11/26/2003 | Kevin W. Eberman | 58581US002 | 8947 | |
| 32692 | 7590 08/30/2006 | | EXAMINER | | |
| 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 | | | VANOY, TIMOTHY C | | |
| | MN 55133-3427 | | ART UNIT | PAPER NUMBER | |
| • | | | 1754 | | |
| | | | DATE MAILED: 08/30/200 | DATE MAILED: 08/30/2006 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) | | | | |
|---|---|---|-----------|--|--|--|
| | 10/723,511 | EBERMAN ET AL. | | | | |
| Office Action Summary | Examiner | Art Unit | | | | |
| | Timothy C. Vanoy | 1754 | | | | |
| The MAILING DATE of this communication ap Period for Reply | opears on the cover sheet w | ith the correspondence addre | ess | | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING IF Extensions of time may be available under the provisions of 37 CFR 1 after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period Failure to reply within the set or extended period for reply will, by statu Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). | DATE OF THIS COMMUNI .136(a). In no event, however, may a d will apply and will expire SIX (6) MOI ate, cause the application to become A | ICATION. reply be timely filed NTHS from the mailing date of this comm BANDONED (35 U.S.C. § 133). | | | | |
| Status | | | | | | |
| 1) Responsive to communication(s) filed on 21. | <u>August 2006</u> . | | | | | |
| 2a) This action is FINAL . 2b) ⊠ Th | This action is FINAL . 2b) This action is non-final. | | | | | |
| 3) Since this application is in condition for allow | ance except for formal mat | ters, prosecution as to the m | nerits is | | | |
| closed in accordance with the practice under | Ex parte Quayle, 1935 C.I | D. 11, 453 O.G. 213. | | | | |
| Disposition of Claims | | | | | | |
| 4)⊠ Claim(s) <u>1-17</u> is/are pending in the applicatio | n. | | | | | |
| 4a) Of the above claim(s) is/are withdra | | | | | | |
| 5) Claim(s) is/are allowed. | | | | | | |
| 6)⊠ Claim(s) <u>1-17</u> is/are rejected. | | | | | | |
| 7) Claim(s) is/are objected to. | | | | | | |
| 8) Claim(s) are subject to restriction and | or election requirement. | , | | | | |
| Application Papers | | | | | | |
| 9) The specification is objected to by the Examir | ner. | | | | | |
| 10)⊠ The drawing(s) filed on 26 November 2003 is | /are: a)⊠ accepted or b)[| objected to by the Examin | er. | | | |
| Applicant may not request that any objection to the | e drawing(s) be held in abeya | nce. See 37 CFR 1.85(a). | | | | |
| Replacement drawing sheet(s) including the corre | ection is required if the drawing | g(s) is objected to. See 37 CFR | 1.121(d). | | | |
| 11) ☐ The oath or declaration is objected to by the E | Examiner. Note the attache | d Office Action or form PTO | -152. | | | |
| Priority under 35 U.S.C. § 119 | | | | | | |
| 12) Acknowledgment is made of a claim for foreig a) All b) Some * c) None of: | gn priority under 35 U.S.C. | § 119(a)-(d) or (f). | | | | |
| 1. Certified copies of the priority documer | nts have been received. | | | | | |
| 2. Certified copies of the priority documer | nts have been received in A | Application No | | | | |
| Copies of the certified copies of the pri | iority documents have beer | າ received in this National St | :age | | | |
| application from the International Bure | , | | | | | |
| * See the attached detailed Office action for a lis | st of the certified copies no | t received. | | | | |
| | | | | | | |
| | | • | | | | |
| Attachment(s) | | | | | | |
| 1) Notice of References Cited (PTO-892) | | Summary (PTO-413) | | | | |
| 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/0) | | (s)/Mail Date Informal Patent Application (PTO-1 | 52) | | | |
| Paper No(s)/Mail Date <u>Aug. 21, 2006</u> . | 6) Other: | | • | | | |

Art Unit: 1754

DETAILED ACTION

Withdrawal of Finality

The finality of the Office Action mailed on June 21, 2006 is withdrawn in view of the recently found U. S. Patent 6,881,393 B2 and its application in a new 35USC103 rejection in this non-final Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The person having ordinary skill in the art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this application reasonably reflect this level of skill.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 1754

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent 6,881,393 B2 to Spitler et al.

Claim 1 in U. S. Patent 6,881,393 B2 discloses a process for making an oxide of lithium and transition metal, comprising:

milling lithium transition metal oxide particles, and

re-firing the lithium transition metal oxide particles.

Claim 5 in U. S. Patent 6,881,393 B2 discloses that the milling is accomplished by wet-milling. Col. 5 Ins. 2-3 sets forth that the drying may be part of the re-firing process.

Please note that col. 5 Ins. 10-11 in U. S. Patent 6,881,393 B2 discloses that the refiring temperature is between 250 and 900 °C.

The difference between the applicants' claims and U. S. Patent 6,881,393 B2 is that the applicants' claims are drawn to making a lithium transition metal oxide containing cobalt, manganese and nickel.

Col. 2 Ins. 31-33 in U. S. Patent 6,881,393 B2 sets forth that the transition metal is selected from Ti, Co, Mn, V, Fe and Ni.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected Co, Mn and Ni out of the prior art group

Art Unit: 1754

of Ti, Co, Mn, V, Fe and Ni set forth in col. 2 lns. 31-33 in U. S. Patent 6,881,393 B2 as the "transition metal" set forth in claim 1 in U. S. Patent 6,881,393 B2, in the manner set forth in the applicants' claims, because one skilled in the art would "envisage" each member of the prior art's genus: please see the discussion of the *In re Petering* 301, F.2d 676, 681, 133 USPQ 275, 280 (CCPA 1980) court decision set forth in section 2144.08(II)(A)(4)(a) in the MPEP 8th Ed., Rev. 3 Aug. 2005.

The difference between the applicants' claims and U. S. Patent 6,881,393 B2 is that the applicants' claims set forth that it is a *slurry* that results from the wet milling, and that it is this *slurry* that is heated, however it is submitted that this difference would have been obvious to one of ordinary skill in the art at the time the invention was made because it is reasonably expected that the same process making the same lithium and transition metal oxide by the same step of wet milling the lithium transition metal oxide particles will inherently produce the same claimed slurry (as a consequence of wet-milling): please note the discussion of the *In re Wiseman* 596 F.2d 1019, 201 USPQ 658 (CCPA 1979) court decision set forth in section 2145(II) in the MPEP 8th Ed. Rev. 3 Aug. 2005 where it was determined that mere recognition of latent properties in the prior art does not render non-obvious an otherwise known invention. In this case, the production of a slurry is submitted to be one of these "latent properties" mentioned in the discussion of the *In re Wiseman* court decision.

Note that col. 1 lns. 18-20 in U. S. Patent 6,881,393 B2 discloses that lithium-transition metal oxides are materials presently used or under development are for the

Art Unit: 1754

electrodes of lithium ion batteries, in a manner rendering obvious the limitations of applicants' claims 15-17.

Response to Arguments

Applicant's arguments submitted with their amendment filed on Aug. 21, 2006 with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/723,511 Page 6

Art Unit: 1754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Timothy C Vansy Timothy C Vanoy Primary Examiner Art Unit 1754

tv